REMARKS

Claims 1-3, 10-12, 22-33 and 37-48 are pending in the present application. Claims 1-3 and 10-12 were amended in this response. No new matter has been introduced as a result of the amendments. Support for the amendments may be found, for example, on page 2, lines 27-32, and page 4, line 23 - page 5, line 8.

Applicant request an examiner interview to discuss the present claims, and to clarify the examiner's position regarding the cited documents. Applicant respectfully submits that the reasoning behind the multitude of combinations is not entirely clear.

Claims 1-3, 10, 22-33, 37, 40, 43 and 46 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Kilner* (US Patent 5,649,089) in view of *Renaud* (US Patent 5,958,051) and *Frezza et al.* (US Patent No. 4,982,430)/*McNamara* (US Patent 4,533,948).

Claims 11, 12, 38, 39, 41, 42, 44, 45, 47 and 48 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Kilner* (US Patent 5,649,089) in view of *Renaud* (US Patent 5,958,051) and *Frezza et al.* (US Patent No. 4,982,430)/*McNamara* (US Patent 4,533,948) and further in view of *Mattison* (US Patent 5,778,070). In light of the present amendments, Applicants respectfully traverse these rejections. Favorable reconsideration is earnestly requested.

None of the cited art, alone or in combination teaches or suggests the feature of performing a commutative operation on segment checksums, wherein flow control for the data segments is negated by the commutative operation. Under the claimed configuration, by using the commutative operation for individual checksums of the data segments, flow control for the order of the individual data segments is no longer required.

In contrast, *Kilner* proposes a cryptographic function that necessarily relies on flow control of individual data segments (col.1 41-55; col. 2, lines 44-55; col. 3, lines 51-65), as each checksum is specifically directed to changes in specific places of a record database and affiliating an old checksum value from the cumulative checksum (see claim 1). *Frezza* (col. 3, lines 60-62; col. 5, lines 39-50), *McNamara* and *Mattison* (col. 3,line 58 - col. 4, line 7) also rely on flow control as well. *Renaud* and *McNamara* are completely silent regarding these features.

Furthermore, Applicants submit that there is no teaching, suggestion or motivation for one of ordinary skill in the art to combine the *Kilner, Renaud, Frezza/McNamara* references in the manner suggested in the Office Action. In making a determination that an invention is

obvious, the Patent Office has the initial burden of establishing a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S. P.Q.2d 1955, 1956 (Fed. Cir. 1993). "If the examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992).

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper. *Ex parte Skinner*, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986). (see MPEP 2142).

Further, the Federal Circuit has held that it is "impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious." *In re Fritch*, 23 U.S.P.Q.2d 1780, 1784 (Fed. Cir. 1992). "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention" *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Moreover, the Federal Circuit has held that "obvious to try" is not the proper standard under 35 U.S.C. §103. *Ex parte Goldgaber*, 41 U.S.P.Q.2d 1172, 1177 (Fed. Cir. 1996). "An-obvious-to-try situation exists when a general disclosure may pique the scientist curiosity, such that further investigation might be done as a result of the disclosure, but the disclosure itself does not contain a sufficient teaching of how to obtain the desired result, or that the claim result would be obtained if certain directions were pursued." *In re Eli Lilly and Co.*, 14 U.S.P.Q.2d 1741, 1743 (Fed. Cir. 1990).

Kilner discloses a CRC checksum (R_CRC) and a cumulative checksum (A_CRC) for an entire database. This configuration allows for real time tracking of changes to a data base by providing a record checksum for a record and incorporating uniquely and reversibly the record checksum for the record into a cumulative checksum for the data base. Each record checksum is incorporated reversibly into this 32-bit value, by shifting its CRC-16 left by its record number modulo 16 and XOR-ing it into the cumulative checksum. This calculation detects the error of an identical record in a different location (col. 3, lines 32-65). In contrast, *Renaud* discloses that the one-way hash is used to provide additional security (col. 7, lines 15-28), but the Office Action fails to consider that the on-way hash would effectively negate any reversible checksums being performed in *Kilner*.
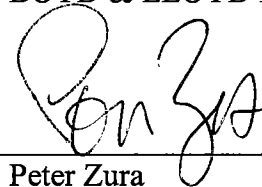
Furthermore, *Frezza* deals with a configuration for securely downloading data from a remote site , where booter data is downloaded to a terminal to establish subscriber identity (col. 4, lines 18-36) The checksum is merely performed to <u>merely validate the user to establish a communication link</u> (col. 5, line 39 - col. 6, line 19). Applicant respectfully submits that it is wholly improper to "piece together" elements in a vacuum, without considering the context in which the disclosure is made in the reference. For what possible reason would an <u>additional</u> cryptographic checksum (as in *Frezza*) be applied to the already-secure checksum in *Kilner*? The Office Action states as the purported motivation for the combination is that *Kilner* would obtain a "secure" first commutative checksum. But secure from what? Each record checksum in Kilner is *already applied with a CRC and XOR-ed it into the cumulative checksum.* The same rationale applies to *McNamara* as well. For at least these reasons, applicant submits the rejection is improper and should be withdrawn.

In light of the above, Applicants respectfully submit that independent claims 1-3 and 10-12 of the present application, as well as claims 19-34 and 36-48 which respectively depend therefrom, are both novel and non-obvious over the art of record. Accordingly, Applicants respectfully request that a timely Notice of Allowance be issued in this case. If any additional fees are due in connection with this application as a whole, the Examiner is authorized to deduct said fees from Deposit Account No.: 02-1818. If such a deduction is made, please indicate the attorney docket number (0112740-466) on the account statement.

Respectfully submitted,

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